

3021 375

# Work Order ID 100402

April-22-13 1:03:34 PM

\*100402\*

Page 1

Item ID: D4021-9

Accept

\*N900040100\*

Setup

Start

\*NS1\*

Revision ID:

Item Name: Bushing

Stop

\*NS2\*

Start Date: 4/22/13

Start Qty: 100.00

\*100\*

Cust Item ID:

Required Date: 4/30/13

Req'd Qty: 100.00

\*100\*

Customer:

Reference:

Approvals:

Process Plan: ML5

Date: 13-04-23

Tooling:

Date:

Run

Start

\*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop

\*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
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D4021	B
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100	0.00
-----	------

**\*100\***

Hardinge

Hardinge CNC Lathe Small

Memo

0.00

13-04-29

100 Ø

TURN AS PER FOLIO FA 868 AND DWG D4021

DWG REV: B

FOLIO REV: N/A

\*\*\*MACHINE TO .375" MAX OD \*\*\*

DEBURR

110	0.00
-----	------

QC2- Inspect parts off machine FAI/FAIB

0.00

**\*110\***

QC

Quality Control

Memo

0.00

13-04-29

100 Ø

NCR: Yes / No

## **WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: Date:

QA Closed: Date:

Work Order: _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS					
				Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>			
				Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>			
				Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>			
				Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>				
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear				General							
Bending				Bend <input type="checkbox"/>	Grain <input type="checkbox"/>			Ovalized <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>		
Centre Not Concentric to O/S				BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>			Over/Under tolerance <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>		
Cracks				Broken/Damaged <input type="checkbox"/>	Inspection Incomplete <input type="checkbox"/>			Part Incorrect <input type="checkbox"/>	Weld <input type="checkbox"/>		
Crushed/Crimped				Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>			Part Lost/Missing <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>		
Cuffs				Contamination <input type="checkbox"/>	Maintenance <input type="checkbox"/>			Part Moved <input type="checkbox"/>			
Heat Treat				Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>			Positioned Wrong <input type="checkbox"/>			
Inspection Strip in Tube				Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>			Power Loss/Surge <input type="checkbox"/>			
Ripples in Bend				Drill Holes <input type="checkbox"/>	Offset <input type="checkbox"/>						
Torque Waves in Extrusion				Drawing <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>						
Turning Sequence				Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>						
Wave/Twist in Tube				Folio <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>						

**Work Order ID 100402**

April-22-13 1:03:34 PM

**\*100402\***

Page 2

**Item ID:** D4021-9**Accept****\*N900040100\*****Setup****Start****\*NS1\*****Revision ID:****Item Name:** Bushing**Stop****\*NS2\*****Start Date:** 4/22/13**Start Qty:** 100.00**\*100\*****Cust Item ID:****Required Date:** 4/30/13**Req'd Qty:** 100.00**\*100\*****Customer:****Reference:****Approvals:****Process Plan:****Date:****Tooling:****Date:****Run****Start****\*NR1\*****QC:****Date:****SPC (Y/N):****Date:****Stop****\*NR2\*****Sequence ID/  
Work Center ID****Operation  
Description****Set Up/  
Run Hours****Tool ID****Tool #****Plan  
Code****Accept  
Qty****Reject  
Qty****Reject  
Number****Insp.  
Stamp**

120

QC8- Inspect parts - second check

0.00

13-5-1

160

4

DAS  
04  
9-69**\*120\***

QC

Quality Control

**Memo**

0.00

130

Identify as per dwg &amp; Stock Location

0.00

WAO04-

**\*130\***

Packaging

Packaging

**Memo**

0.00

160x

Sp  
13-5-7

140

QC21- Final Inspection - Work Order Release

0.00

**\*140\***

QC

Quality Control

**Memo**

0.00

135/788

ABOTS

NCR: Yes / No

## **WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: Date:

OA Closed: Date:

Work Order: _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS					
				Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>			
				Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>			
				Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>			
				Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>				
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear				General							
Bending	Bend	Grain	Ovalized	Pressure/Forced							
Centre Not Concentric to O/S	BOM/Route	Hardware	Over/Under tolerance	Temperature/Cure							
Cracks	Broken/Damaged	Inspection Incomplete	Part Incorrect	Weld							
Crushed/Crimped	Burrs	Instructions Incomplete/Unclear	Part Lost/Missing	Wrong Stock Pulled							
Cuffs	Contamination	Maintenance	Part Moved								
Heat Treat	Countersink	Mislabeled	Positioned Wrong								
Inspection Strip in Tube	Cut Too Short	Misread	Power Loss/Surge								
Ripples in Bend	Drill Holes	Offset	Other								
Torque Waves in Extrusion	Drawing	Out of Calibration									
Turning Sequence	Finish	Out of Sequence									
Wave/Twist in Tube	Folio	Outside Dimensions									

# Picklist Print

April-22-13 1:03:34 PM

Page 1

Work Order ID: 100402

Parent Item: D4021-9

Parent Item Name: Bushing

Start Date: 4/22/13

Required Date: 4/30/13

Start Qty: 100.00

Required Qty: 100.00

Comments: IPP REV:A NEW ISSUE 09-11-23 JLM VERIFIED BY:DD IPP Rev:B as per dwg REV.A  
DD 10.02.22 verified by:EC IPP Rev:C as per dwg revB DD 10.04.20 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304R0.375 304 ROUND BAR 0.375		Purchased	No			f		28.0330		7.500'	8.3	sd 13-04-29	

Location	Loc Qty	Loc Code
MAT029	28.033	
119346	2.328	
120204	5.442	
121380	3.846	
123794	16.417	

M304R.437

Jan 13-04-25

121380

6.300'

121 517

1.200'

NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: Date:

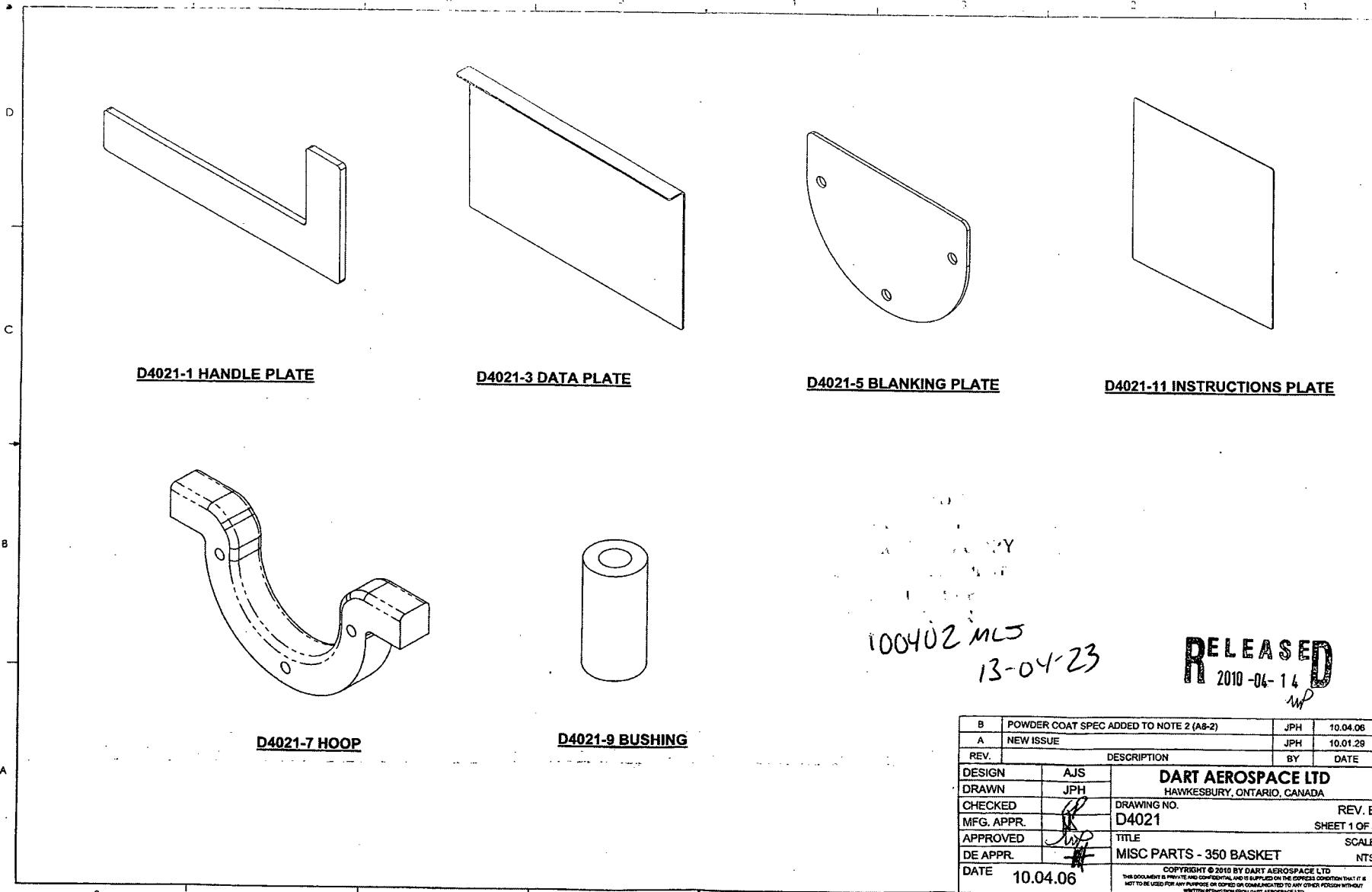
Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Use-as-is <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>		
			Work Order Update <input type="checkbox"/>	Machining <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>			
					Finishing <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>			
					Composite <input type="checkbox"/>		Supplier <input type="checkbox"/>				
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear				General							
				Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Grain <input type="checkbox"/>	Ovalized <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>			
				Centre Not Concentric to O/S <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>			
				Cracks <input type="checkbox"/>	Broken/Damaged <input type="checkbox"/>	Inspection Incomplete <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Weld <input type="checkbox"/>			
				Crushed/Crimped <input type="checkbox"/>	Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>			
				Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Part Moved <input type="checkbox"/>				
				Heat Treat <input type="checkbox"/>	Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>				
				Inspection Strip in Tube <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>	Other <input type="checkbox"/>			
				Ripples in Bend <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Offset <input type="checkbox"/>					
				Torque Waves in Extrusion <input type="checkbox"/>	Drawing <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>					
				Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>					
				Wave/Twist in Tube <input type="checkbox"/>	Folio <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>					

DART AEROSPACE LTD	Work Order:	100402
Description: Bushing	Part Number:	D4021-9
Inspection Dwg: D4021 Rev: B		Page 1 of 1

# FIRST ARTICLE INSPECTION CHECKLIST

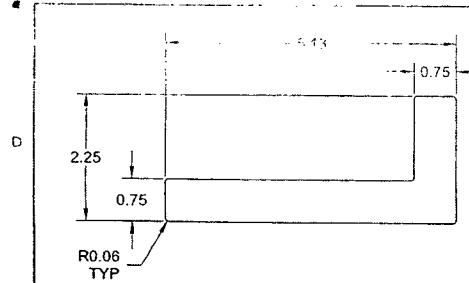
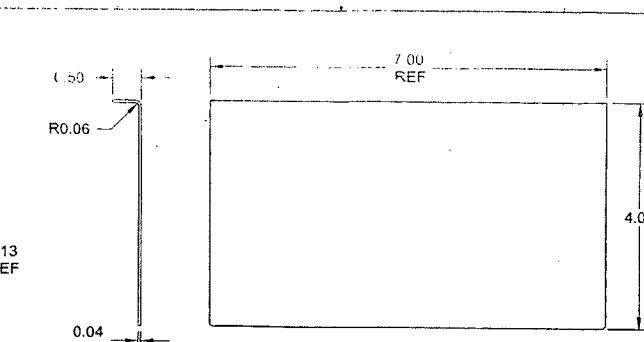
Measured by:		Audited by:	04 9-89	Preliminary Approval:	
Date:	13-4-25	Date:	13.5.1	Date:	

Rev	Date	Change	Revised by	Approved
A	10.06.08	New Issue	KJ	AM

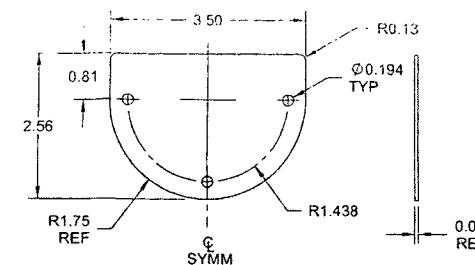
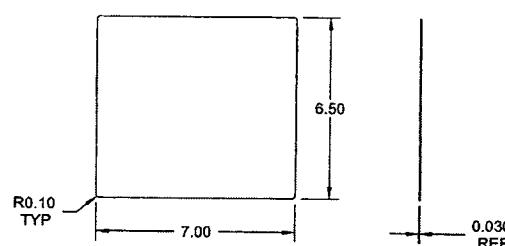
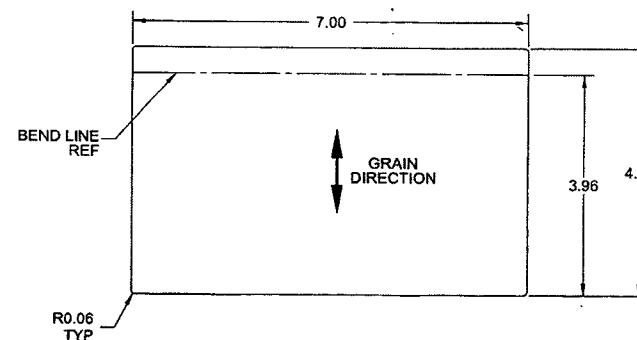


B	POWDER COAT SPEC ADDED TO NOTE 2 (A8-2)			JPH	10.04.06
A	NEW ISSUE			JPH	10.01.29
REV.	DESCRIPTION			BY	DATE
DESIGN	AJS	DART AEROSPACE LTD			
DRAWN	JPH	HAWKESBURY, ONTARIO, CANADA			
CHECKED	JPH	DRAWING NO.	REV. B		
MFG. APPR.	JPH	D4021	SHEET 1 OF 3		
APPROVED	JPH	TITLE	SCALE		
DE APPR.	JPH	MISC PARTS - 350 BASKET	NTS		
DATE	10.04.06	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

100402

**D4021-1 HANDLE PLATE****D4021-3 DATA PLATE**

MAKE FROM D4021-3F

**D4021-5 BLANKING PLATE****D4021-11 INSTRUCTIONS PLATE****D4021-3F DATA PLATE**  
FLAT PATTERN

**RELEASED**  
R 2010-04-14  
M

**NOTES:**

- 1) MATERIAL -1: 304/316 STAINLESS STEEL SHEET ANNEALED 2B FINISH,  
PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240  
REF DART SPEC M304S11GA
- 3F: 304/316 STAINLESS STEEL SHEET ANNEALED 2B FINISH,  
PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240  
REF DART SPEC M304S20GA
- 5: 303/304/316 STAINLESS STEEL SHEET ANNEALED 2B FINISH,  
PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240  
REF DART SPEC M303S16GA OR M304S16GA
- 11: 304/316 STAINLESS STEEL SHEET ANNEALED 2B FINISH,  
PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240  
REF DART SPEC M304S22GA

A

(B) 2) FINISH : -1/-3/-11: NONE  
-5: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3  
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED  
4) UNITS: INCHES UNLESS OTHERWISE NOTED  
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX  
6) IDENTIFICATION: N/A  
7) WEIGHT -1: 0.18 lbs -3: 0.35 lbs  
-5: 0.14 lbs -11: 0.39 lbs

8

7

6

5

4

3

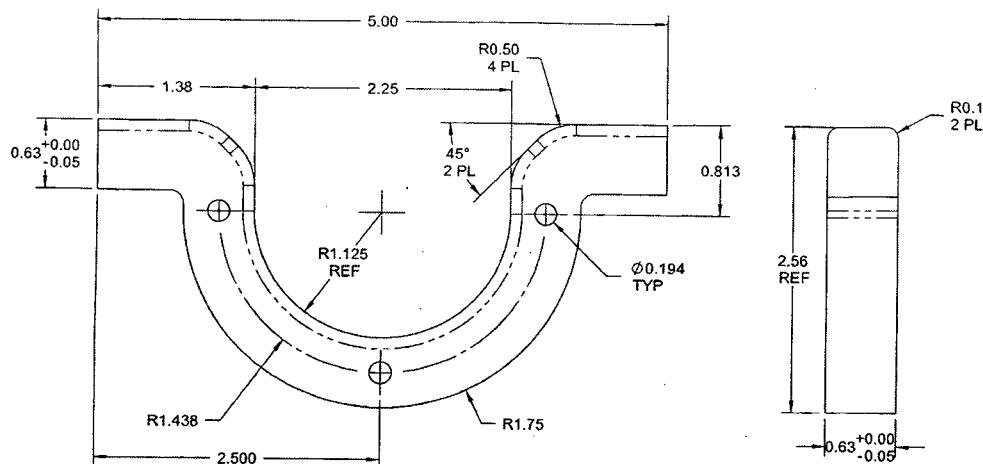
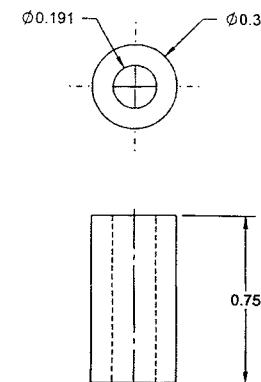
2

1

DESIGN	AJS	<b>DART AEROSPACE LTD</b>	
DRAWN	JPH	HAWKSLEY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	
MFG. APPR.		REV. B	
APPROVED		D4021	
DE APPR.		SHEET 2 OF 3	
DATE	10.04.06	TITLE	SCALE
		MISC PARTS - 350 BASKET	NTS

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100402

D4021-7 HOOPD4021-9 BUSHING

## NOTES:

- 1) MATERIAL-7: 304/316 STAINLESS STEEL BAR, PER ASTM A276  
REF DART SPEC M304B
- 9: 304/316 STAINLESS STEEL ROUND BAR, PER ASTM A276  
REF DART SPEC M304R
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT -7: 0.80 lbs  
-9: 0.02 lbs

**RELEASED**  
2010-04-14  
NR

DESIGN	AJS	DART AEROSPACE LTD	
DRAWN	JPH	HAWKESBURY, ONTARIO, CANADA	
CHECKED	WJ	REV. B	
MFG. APPR.	WJ	DRAWING NO.	D4021
APPROVED	WJ	SHEET 3 OF 3	
DE APPR.	WJ	TITLE	MISC PARTS - 350 BASKET
DATE	10.04.06	SCALE	NTS

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8 7 6 5 4 3 2 1